Conclusions: SF after BES occurs in 4.1% of lesions and is associated with higher rate of MACE, driven by higher rate of TLR.

TCT-455

Clinical Outcomes in the Percutaneous Coronary Intervention of In-Stent Restenosis with the XIENCE V Everolimus-Eluting Stent

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Background: Though percutaneous coronary intervention with the XIENCE V® everolimus-eluting stent (EES, Abbott Vascular, Santa Clara, CA) for native coronary artery disease has favorable results compared to first generation drug-eluting stents, outcomes with EES for the treatment of in-stent restenosis (ISR) are unknown. The objective of this study is to evaluate the safety and efficacy of XIENCE V for the treatment of ISR.
Methods: XIENCE V USA is a prospective observational multicenter registry evaluating clinical outcomes in patients who received treatment with EES. In this study, we present the 1-year clinical outcomes in patients who received EES for the treatment of ISR and non-ISR in this registry. The primary outcome was the composite of target lesion failure (defined as cardiac death, target vessel myocardial infarction, or target lesion revascularization). Secondary outcomes were myocardial infarction, target lesion revascularization, and stent thrombosis.
Results: In this registry 383 patients (64±11 years old; 68.4% male) received revascularization for single-vessel ISR and 4832 patients (64±11 years old; 69.0% male) received revascularization for non-ISR lesions. At 1 year, the rate of clinical adverse events (**Table**) was higher in the ISR group compared the non-ISR group, however, these differences ceased to exist when case-control matched patients in the non-ISR group were studied.
Conclusions: The treatment of ISR with EES appears to be safe and efficacious at 1-year follow-up. Compared to the non-ISR group, the rate of target lesion failure was much higher indicating a higher risk profile of these patients. However, these differences ceased to exist with case controlled matching.

Table. Clinical outcomes at 1 year.

	ISR Group (N=383)	Non-ISR Group (N=4,832)	Case-Matched Non-ISR Group (N=317)
Target Lesion Failure (ARC MI)	12.5%	7.0%	10.5%
Myocardial Infarction (ARC)	7.2%	5.8%	7.1%
Target Lesion Revascularization	10.3%	2.9%	6.8%
Stent thrombosis (ARC Definite)	1.7%	0.2%	0.7%

TCT-456

The Impact of Atherogenic Neointima on Long-term Clinical Outcomes: An Observational Study from the Optical Coherence Tomography Registry

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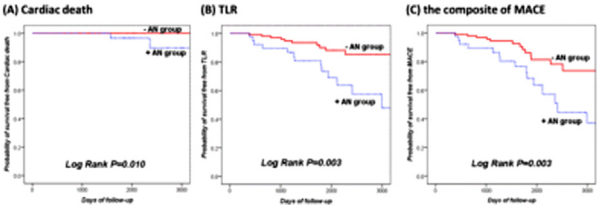
Background: Pathological studies have revealed atherosclerotic neointima (AN) after stent implantation. However, the risk factor of neoatherosclerosis and its impact on future clinical events remain unclear.
Methods: From the Kobe university OCT database, 137 consecutive patients (253 stents) who underwent OCT examination at >1 year after bare metal or first-generation drug-eluting stent implantation were enrolled. We assessed AN (neointima containing a diffuse border, signal-poor region with invisible struts underneath) by follow-up OCT and compared major adverse cardiovascular event (MACE: death, recurrent myocardial infarction and target lesion revascularization (TLR)) rate between +AN and –AN group.
Results: 38 patients had AN at follow-up OCT, who had higher LDL-cholesterol and high sensitivity CRP (hs-CRP) level. In multivariate logistic analysis, LDL cholesterol and hs-CRP were the independent predictors of the presence of AN (OR 1.025 (P=0.011), OR 1.016 (P=0.045), respectively). The rate of MACE were significantly higher in +AN than in -AN for an average follow-up of 58 months after stenting. After multivariate cox hazard analysis, the presence of AN remained an independent risk factor of MACE (HR 2.345, 95% CI 1.010-5.440, P=0.047).



Conclusions: Increased LDL-cholesterol and hs-CRP level may be risk factors for AN progression in patients treated with coronary stents. In this study, the presence of AN assessed by OCT were independently associated with MACE at >1 year after stent placement, suggesting a need for careful clinical follow-up of patients with AN.

TCT-457

Is There A Difference In The Clinical Presentation Of Patients With In-Stent Restenosis Of First- Versus Second-Generation Drug-Eluting Stents?

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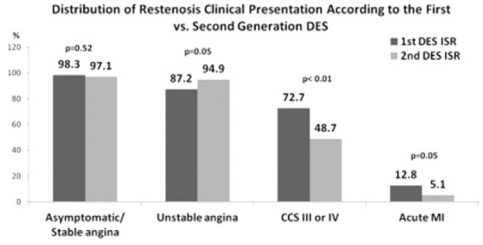
Background: The clinical presentation of bare metal in-stent restenosis (ISR) is reported to be associated with high rates of morbidity, including myocardial infarction (MI). This study aimed to compare the clinical presentation and outcomes between patients treated with 1st- versus 2nd-generation drug-eluting stents (DES) and presented with ISR on admission.
Methods: The study identified first episode 1st or 2nd-generation DES ISR patients who underwent re-intervention. The clinical presentation at admission was classified as non acute (asymptomatic or stable angina) or acute (unstable angina, Canadian Cardiovascular Society (CCS) III or IV and MI). We compared the 1st- vs. 2nd-gen DES ISR clinical presentation and the rates of major adverse cardiac events (MACE) as a composite of death, Q-wave MI and target lesion revascularization at 6 months.
Results: Overall, 709 patients with 1095 DES ISR lesions (1st-gen DES n=526; 2nd-gen DES n=113) were selected. The mean age was 65 ± 10 years and diabetics comprised 49%. Clinical presentation included asymptomatic/stable angina in 29%, unstable angina in 62% and MI in 8%. Patients with 2nd-generation DES ISR were less likely to present as MI(13% vs. 5%; p=0.05) and with severe symptoms (73% vs. 49%, p<0.01) as compared to 1st-gen DES. The incidence of MACE in the 1st- and 2nd-gen DES at 6 months was 8% and 9%, respectively (p=1.0).
Conclusions: 2nd-generation DES ISR clinical presentation appears to be more benign with less frequency of MI and CCS III or IV symptoms compared to 1st-generation DES. The rates of MACE were similar at 6 months.



TCT-458

Angiographic localized haziness after drug-coated balloon angioplasty in de-novo lesions does not increase the risk of acute coronary thrombosis

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Background: Clinical studies demonstrated the effectiveness and safety of drug-coated balloon (DCB) in various clinical scenarios and support the use of paclitaxel-coated balloon for the treatment of in-stent restenosis, of small coronary arteries and bifurcation lesions. A few small scale studies have reported excellent immediate and short term results of DCB use compared to non-coated balloon for de-novo lesions. Initial angiographic